PART I - ADMINISTRATIVE

Section 1. General administrative information

Title of project

Umatilla Passage Facilities O & M

BPA project number: 8343600
Contract renewal date (mm/yyyy): 10/1999 ☐ **Multiple actions?**

Business name of agency, institution or organization requesting funding
Westland Irrigation District

Business acronym (if appropriate) WID

Proposal contact person or principal investigator:

Name	Darryl Burham
Mailing Address	P.O. Box 416
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NPPC Program Measure Number(s) which this project addresses
7.10A, 7.4I

FWS/NMFS Biological Opinion Number(s) which this project addresses
Number 383 - National Marine Fisheries Service Biological Opinion for 1995 to 1998 Hatchery Operations in the Columbia River Basin Section IV.C.3.b

Other planning document references
Wy-Kan-Ush-Mi Wa-Kish-Wit, Volume II. 1995 CRIFTC - Umatilla River, Instream Flow and Passage (II.B.)

Umatilla Subbasin Plan. 1990. CTUIR - Part II, Habitat Protection Needs, Habitat Protection objectives and Strategies and Part IV, Anadromous Fish Production Plans, Spring Chinook Actions (IA,IIIA),Summer Steelhead Actions (IA,IIIA), and Fall Chinook Actions (IA,IIIA).

Umatilla Hatchery Master Plan. 1989. CTUIR/ODFW - Production Profile, Inbasin Constraints and Solutions to Problems and Facilities Needed to Implement Program

Draft Umatilla Supplemental Hatchery Master Plan. 1993. CTUIR - Present Rehabilitation Efforts, Fish Passage Improvement and Flow Enhancement (III.C) and Facilities Needed to Implement Plan (IVB,C)

Umatilla Fisheries Restoration Plan. 1986. ODFW - Present and Proposed Flow Enhancement and Fishery Rehabilitation Projects and Costs and Rehabilitation Objectives and Potential Fishery Benefits

Short description
Maximize the survival of migrating juvenile and adult salmon and summer steelhead in the Umatilla Basin by operating and maintaining passage facilities, trapping facilities, spawning facilities and acclimation facilities according to agency guidelines.

Target species
Coho, Fall Chinook, Spring Chinook, Summer Steelhead

Section 2. Sorting and evaluation

Subbasin
Umatilla

Evaluation Process Sort

CBFWA caucus	Special evaluation process	ISRP project type
Mark one or more caucus	If your project fits either of these processes, mark one or both	Mark one or more categories
☒ Anadromous fish ☐ Resident fish ☐ Wildlife	☒ Multi-year (milestone-based evaluation) ☐ Watershed project evaluation	☐ Watershed councils/model watersheds ☐ Information dissemination ☒ Operation & maintenance ☐ New construction ☐ Research & monitoring ☐ Implementation & management ☐ Wildlife habitat acquisitions

Section 3. Relationships to other Bonneville projects

Umbrella / sub-proposal relationships. List umbrella project first.

Project #	Project title/description
	Umatilla River Tributary Fish Passage
8802200	Umatilla River Fish Passage Operations (submitted separately)
8902700	Power Re-pay Umatilla Basin Project (submitted separately)

8343600	Umatilla Passage Facilities O&M (subject proposal)

Other dependent or critically-related projects

Project #	Project title/description	Nature of relationship
8403300	Umatilla Hatchery O & M	Provide adequate passage for juveniles released by maintaining and operating passage facilities.
8343500	Umatilla Hatchery Satellite Facilities O & M	Provide adequate passage for juneniles released by operating and maintaining passage facilities and assist CTUIR in maintaining satellite facilities.
9000501	Umatilla Basin Natural Production M & E	Provide passage for adults and juveniles to and from natuaral production areas by maintaining and operating passage facilities
8902401	Umatilla River/WEID Screens M & E	Operate and maintain passage facilities.
900050	Umatilla Hatchery M & E	Maintain adult trapping facilities

Section 4. Objectives, tasks and schedules

Past accomplishments

Year	Accomplishment	Met biological objectives?
1998	Maintenance of trapping facilities	Yes, facilities were maintained according to ODFW/CTUIR criteria
1998	Maintenance of spawning facilities	Yes, facilities were maintained according to ODFW/CTUIR criteria
1998	Operation and Maintenance of Juvenile bypasses and Adult Ladders	Yes, bypasses, screens and ladders were operated and maintained according to NMFS criteria
1998	Maintenance of Acclimation Sites	Yes, sites were maintained according to CTUIR criteria

Objectives and tasks

Obj 1,2,3	Objective	Task a,b,c	Task
1	Increase survival of migrating juvenile and adult salmon and steelhead	a	Operate and maintain passage facilities in the Umatilla Basin to ensure adequate passage

		b	Maintain adult trapping facilities
		c	Maintain juvenile trapping facilities
2	Increase adult salmon and steelhead survival and homing to the Umatilla River Basin	a	Assist CTUIR in maintaining adult holding and spawning facilities
		b	Assist CTUIR in maintaining juvenile acclimation facilities

Objective schedules and costs

Obj #	Start date mm/yyyy	End date mm/yyyy	Measureable biological objective(s)	Milestone	FY2000 Cost %
1	10/2000	9/2001			100.00%
					100.00%
				Total	200.00%

Schedule constraints
Funding of projects 8902700and 8443500 listed in Section 3 under umbrella proposals significantly affects the effort and effectiveness of the project. Multiyear funding requested.

Completion date
The project is viewed as ongoing with no completion date identified. Multiyear funding requested.

Section 5. Budget

FY99 project budget (BPA obligated): $671,496

FY2000 budget by line item

Item	Note	% of total	FY2000
Personnel		%34	237,132
Fringe benefits		%12	82,996
Supplies, materials, non-expendable property		%13	92,220
Operations & maintenance		%14	95,177
Capital acquisitions or improvements (e.g. land, buildings, major equip.)		%0	
NEPA costs		%0	
Construction-related		%0	

support			
PIT tags	# of tags:	%0	
Travel	vehicle operation costs	%13	94,736
Indirect costs		%13	90,545
Subcontractor		%0	
Other	Training and Liability Ins.	%1	10,300
TOTAL BPA FY2000 BUDGET REQUEST			$703,106

Cost sharing

Organization	Item or service provided	% total project cost (incl. BPA)	Amount ($)
		%0	
		%0	
		%0	
		%0	
Total project cost (including BPA portion)			$703,106

Outyear costs

	FY2001	FY02	FY03	FY04
Total budget	$724,199	$745,925	$768,302	$791,352

Section 6. References

Watershed?	Reference
☐	Confederated Tribes of the Umatilla Indian Reservation and Oregon Department of Fish and Wildlife. 1989. Umatilla Hatchery Master Plan. Submitted to Northwest Power Planning Council, Portland, Oregon
☐	Confederated Tribes of the Umatilla Indian Reservation and Oregon Department of Fish and Wildlife. 1990. Coumbia Basin System Planning, Umatilla Subbasin, September, 1990. Submitted to Northwest Power Planning Council and Columbia Basin Fish and Wildlife
☐	CTUIR, CTWS, NPT, and YIN. 1995. Wy-Kan-Ush-Mi Wa-Kish-Wit. The Anadromous Fish Restoration Plan of the Nez Perce, Umatilla, Warm Springs and Yakama Tribes. Columbia River Inter-Tribal Fish Commission, Portland, Oregon
☐	National Marine Fisheries Service. 1995. Biological Opinion for 1995 to 1998 Hatchery Operations in the Columbia River Basin. National Marine Fisheries Service, Portland, Oregon
☐	Oregon Department of Fish and Wildlife. 1986. A comprehensive plan for Rehabilitation of Anadromous Fish Stocks in the Umatilla River Basin. Project No 84-10, Contract No DE-AI79-84BP18008, Bonneville Power

	Administration, Portland, Oregon
☐	U.S. Bureau of Reclamation. 1988. Umatilla Basin Project, Oregon. Planning Report - Final Environmental Statement. U.S. Department of the Interior, Northwest Region, U.S. Bureau of Reclamation, Boise, Idaho.
☐	U.S. Fish and Wildlife Service. 1981. Instream Flow Study of the Umatilla River. U.S. Department of the Interior, Fisheries Assistance Office, U.S. Fish and Wildlife Service, Vancouver, Washington.
☐	Zimmerman, B.C., et al. 1991-1992. Trapping and Transportation of Adult and Juvenile Salmon in the Lower Umatilla River in Northeast Oregon 1991-1992 and 1992-1993. Project No. 88-022, Contract No. DE-BI79-89BP98636. Bonneville Power Admin.
☐	Zimmerman, B.C. and Duke, B.B., 1993-1998. Trapping and Transportation of Adult Juvenile Salmon in the Lower Umatilla River in Northeast Oregon 1992-1993 through 1997-1998 Project No. 88-022, Contract No. DE-BI79-89BP98636. Bonneville Power Admin.
☐	Rowan, G.D. 1997 Umatilla Hatchery Satellite Facilities Operation and Maintenance. Project No. 83-435, Contract No. DE-BI79-84BP17622. Bonneville Power Administration, Portland, Oregon.
☐	

PART II - NARRATIVE

Section 7. Abstract

In the 1980's, CTUIR and ODFW began implementing the Umatilla Fisheries Restoration Plan. An integral part of that effort was to address the inadequate flow and migration conditions (which led to salmon extirpation) by constructing fish passage facilities, initiating a trap and haul program, and implementing the Umatilla Basin flow enhancement project.

The Umatilla Passage Facilities O&M Project main objective is to increase adult and juvenile migrant survival in the Umatilla Basin. The project provides survival benefits for both hatchery and natural production by operating and maintaining ladders, bypasses, screen sites and trap facilities. A secondary objective of the project is to support the basin artificial production program by assisting CTUIR in the maintenance of the adult holding and spawning facilities and juvenile acclimation sites.

The project began in 1989 under the U.S. Bureau of Reclamation and a irrigation district component began in 1990 as part of the Umatilla Trap and Haul Project. The two portions of the project were combined under the Bureau of Reclamation in 1992 and was transferred to Westland Irrigation District in 1997. The project is viewed as a long term O& M project required for maintaining the survival advantages achieved by implementation of the fish passage and satellite facility projects in the Umatilla Basin.

Section 8. Project description

a. Technical and/or scientific background

The lower 30 miles of the Umatilla River is heavily diverted for agricultural use. Historically, inadequate flow conditions in this river reach during critical portions of both adult and juvenile migration periods was the primary contributer to extirpation of salmon and decline of summer steelhead populations in the Umatilla River.

Beginning in the early 1980's, CTUIR and ODFW began implementing a comprehensive plan to supplement steelhead and reestablish salmon runs in the Umatilla River Basin. A key component of the Umatilla Fisheries Restoration Plan was a threefold approach to addressing the inadequate migration conditions. The three ingredients included construction of fish passage facilities in the lower river, trapping and transportation of adults and juveniles, and implementation of the Umatilla Basin flow enhancement project. The project is currently responsible for operation and maintenance of the lower river passage facilities.

Another key component of the Umatilla Fisheries Resoration Plan was the initiation of artificial propagation programs to supplement summer steelhead and restore salmon to the basin. Adult holding and spawning and juvenile acclimation satellite facilities were identified as needed for Umatilla Hatchery production. The project is also responsible for maintenance at these satellite facilities.

It is assumed that properly maintained passage facilities will increase survival for adult and juvenile migrants. This should, in turn, assist in the restoration effort in the basin by helping ensure that physical passage facilities are providing adequate passage conditions. In addition, the acclimation sites maintained by the project in conjunction with CTUIR have been identified by NMFS in their Hatchery Biological Opinion as being a necessary component to reduce straying of Umatilla fall chinook into the Snake River.

The project began in 1989 under the U.S. Bureau of Reclamation. An irrigation district component was added in 1990 as part of the Umatilla Trap and Haul Project. The two portions of the project were combined under the Bureau of Reclamation in 1992 and was transferred to Westland Irrigation District in 1997. The project is viewed as a long term O & M project required for maintaining the survival advantages achieved by implementation of the fish passage and satellite facility projects in the Umatilla Basin. The project leader has been on the project since 1995 and participates in the following related forums; Umatilla Technical Work Group and Umatilla River Operations Group.

b. Rationale and significance to Regional Programs

As stated in Section 8.a., inadequate passage conditions for both unstream and downstream migrants was the primary contributer to the extirpation of salmon and the decline of steelhead in the Umatilla Basin. Many passage improvements have been implemented in the lower Umatilla River, the primary objective of the project is to operate and maintain these facilities to increase the survival of migrating adults and juveniles in order to meet the Council's goal of increasing the number of returning adults.

The secondary objective of the project is related to operating and maintaining the satellite facilities identified as required to enhance the success of the artificial production program. Proper maintenance of these satellite facilities should also assist in meeting the Council's rebuilding goal of increasing the number of returning adults.

The project objectives are directly related to the Council's goals listed in the1994 Fish and Wildlife Program to halt the decline of summer steelhead and allow rebuilding of the steelhead population and restoration of salmon populations to continue. The project objectives are specifically outlined in Section 7.10 and 7.4I of the 1994 Fish and Wildlife Program. The project provides in place, in kind mitigation for historical losses associated with water diversions in the Umatilla Basin.

The Umatilla Fisheries Restoration Plan is a comprehensive effort which involves many different projects. This not only includes the umbrella subproposals and other BPA projects listed in Section 3 but public and private habitat enhancement efforts as well. The success of the Umatilla Fish Passage Operations and Umatilla Hatchery Satellite Facilities O&M projects are directly related to the ability of the Passage Facilities Project to maintain basin passage facilities and satellite facilities in good working order.

c. Relationships to other projects

The Fish Passage Facilities O&M Project is a cooperative effort between Westland and West Extension irrigation districts. The project is responsible for O&M at USBOR and BPA funded passage facilities. The daily operation and maintenance of the fish passage facilities is conducted under the direction of CTUIR & ODFW, through the Umatilla Fish Passage Operations Project, and NMFS guidelines regarding passage facilities O&M.

The project is also directly involved in the production component of restoration program. The project assists CTUIR in maintaining acclimation sites and spawning facilities. These facilities acclimate smolts which are produced at both ODFW and U.S. Fish and Wildlife Service hatcheries and hold adults for spawning which provide eggs to ODFW and USFWS hatcheries.

d. Project history (for ongoing projects)

The project began in 1989 under the U.S. Bureau of Reclamation. An irrigation component was added in 1990 as part of Umatilla Trap and Haul Project. The two portions of the project were combined under the Bureau of Reclamation in 1992 and was transferred to Westland Irrigation District in 1997. It has retained the same project number over that period but beginning with FY97 the statement of work was expanded to include O&M assistance to CTUIR for the Umatilla Hatchery satellite facilities.

Project costs for passage facilities in FY97/98 was $403,901 and FY98/99 is $424,222 and for satellite facilities in FY97/98 was $279,396 and for FY98/99 is $247.223. The project does not produce an annual report but details related to project activities are included in the Umatilla Fish Passage Operations and Umatilla Hatchery Satellite Facilities O&M annual reports.

e. Proposal objectives

The project has two objectives outlined in its statement of work; one related to operation and maintenance of passage facilities and one related to maintenance of satellite facilities. There are three tasks associated with the passage objective: 1) operate and maintain passage facilities; 2) maintain adult trapping facilities; and 3) maintain juvenile trapping facilities. There are two tasks associated with the production objective: 1) assist CTUIR in the maintenance of adult holding and spawning facilities and 2) assist CTUIR in maintenance of juvenile acclimation facilities.

Since the project is operational in nature rather than research oriented, specific data related to success of the project is limited. Project activities are evaluated primarily by whether or not the operation and maintenance of the facilities meets the needs and/or criteria outlined by NMFS, ODFW and CTUIR. The project does not produce an annual report but details related to project operations are covered in the Umatilla Fish Passage Operations and Umatilla Hatchery Satellite Facilities O&M annual reports.

f. Methods

As noted in Section 8.e., there are three passage related tasks and two production facility tasks associated with the project objectives.

Objective 1. Increase the survival of migrating juvenile and adult salmon and steelhead.

Task 1. Operate and maintain passage facilities in the Umatilla Basin to ensure adequate passage. Operation and maintenance of juvenile screen sites, bypasses, and adult ladders are generally performed under NMFS guidelines as directed by the Umatilla Fish Passage Operations Project using maintenance schedules developed by Bureau of Reclamation during implemention of the project.

Task 2. Operate and maintain adult trapping facilities. Maintenance of adult trapping facilities is conducted under the direction the Umatilla Fish Passage Operations Project.

Task 3. Maintain juvenile trapping facilities. Maintenance of juvenile trapping facilities is conducted under the direction of the Umatilla Fish Passage Operation Project and Umatilla River/WEID Screens M&E Project.

Objective 2. Increase the survival of migrating juvenile and adult salmon and steelhead.

Task 1. Maintain adult holding and spawning facilities. Assist CTUIR in maintaining adult satellite facilities under the direction and maintenance schedules developed by the Umatilla Hatchery Satellite Facilities O&M project.

Task 2. Maintain juvenile acclimation facilities. Assist CTUIR in maintaining juvenile satellite facilities under the direction and maintenance schedules developed by the Umatilla Hatchery Satellite Facilities O&M Project.

g. Facilities and equipment

The major passage and trapping facilities operated and maintained by the project in the Umatilla Basin are described in detail in the Umatilla River Fish Passage Operations annual report, Trapping and Hauling of Adult and Juvenile Salmon in the Lower Umatilla River in northeast Oregon, 1997-1998 (Zimmerman and Duke 1998). The adult holding and spawning facilities and juvenile acclimation facilities maintained by the project are described in the Umatilla Hatchery Satellite Facilities O&M annual report.

The Project currently has sufficient office space and support vehicles. Shop availability is limited to perform major screen repairs.. The project also has one computer which is adequate for project recordkeeping and data assimilation requirements. No additional high cost capital items are anticipated.

h. Budget

These costs have been developed over the last two years (FY97/98 and FY98/99) Some of these costs represent startup costs (ie. vehicles, equipment, materials and supplies). Costs have been reduced from previous years. Due to the critical need for this project multiyear funding is being requested.

Costs for maintaining satellite facilities will decrease as CTUIR O&M increases at these sites.

Personnel Costs are based on manpower required to operate and maintain the passage facilities on a daily basis and provide manpower to perform annual maintenance during non-irrigation periods. Costs are also included for maintaining adult and juvenile trapping facilities during trapping operations and performing annual maintenance during non-trapping periods. Costs are also included for maintaining the spawning and acclimation sites.

Shop – As shop availability is limited for major maintenance, additional funding for adequate shop space is requested.

Supplies – Supplies necessary to perform maintenance on existing equipment such welding supplies, nuts,bolts, fabrication material, gears, chains etc..Electrical components such as electrical breakers, relays, motors, controllers, fuses and related supplies.

Operations and Maintenance – Costs are based on maintenance needs determined by NMFS, CTUIR and ODFW.

Travel - Costs associated with vehicle mileage, operating costs and insurance. A small portion is related to travel to screen passage workshops.

Indirect – Standard Westland I.D. rate

Section 9. Key personnel

Darryl N. Burham
Manager, Fisheries program
Westland/West Extension I.D.

Employment
1995 – Present
Westland I.D.
Stanfield, Oregon
West Extension I.D.
Irrigon, Oregon
Fisheries program manager (1.0 FTE)
Oversee and direct district activities related to O&M of fish passage facilities
Oversee and direct district activities related to maintenance of juvenile and adult salmon and stelhead trapping facilities.
Oversee and direct district activities related to maintenance of spawning and acclimation facilities.
Serve on Umatilla technical work group
Serve on Umatilla river operations group.
Develop maintenance schedules and techniques for maintenance program on fisheries related sites and equipment.

1979 – 1995
U.S. Bureau of Reclamation, Yakima project, Yakima, Wa.
Power Programs manager, Foreman III
Administered all areas of Hydroelectric generation on Yakima Project.
Developed operation and maintenance programs according to USBR guidelines.
Developed safety programs, lockout procedures. Produced monthly and annual reports on generation totals. Scheduled generation output with BPA. Served as management represenative on labor relations and negotiating commitees. Presented various O&M programs at workshops and Power O&M conferences.

1975 – 1979
U.S. Bureau of Reclamation, Minidoka Project, Burley, Idaho
Powerplant Operator/Mechanic
Operated and Maintained 7 Hydroelectric generators and related equipment.
Served as IBEW 283 Chairman and was a member of safety committee and labor negotiating committees.

1968 – 1977
Idaho Power Company, Boise, Idaho
Powerplant Operator/Mechanic
Operated and maintained various powerplants in Idaho Powers system
Duties very similar to those described above.
Completed apprenticeship programs (2) in Powerplant Operations and Powerplant Maintenance.

Education
Treasure Valley C.C. Ontario, Ore. 1964-1965
AA Agriculture Chemical Eng.
Boise State University 1968
Industrial Electricity (Apprenticeship program) completed
Industrial Mechanics (Apprenticeship program) completed

Section 10. Information/technology transfer

The technical information obtained by the project is disseminated by means of basin technical and operational group meetings and by informal interagency and interproject communication (field meetings, memorandums, and personal communication).

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Congratulations!